

H. M. PENDLEBURY

Rhopalocera from Mangalum Island, North-west Borneo

By H. M. PENDLEBURY, F. M. S. Museums
(Plate V)

The following sixteen species of butterflies were taken by Mr. C. Boden Kloss, Director of Museums, S. S. and F. M. S., between July 8th—15th 1928 on Mangalum Island which is about thirty miles North-west of Jesselton, British North Borneo.

The collections obtained are most interesting, considering the small size of the island (less than a mile and a half in diameter and quite flat except at the centre where it rises to 30—40 feet) which should therefore have a very restricted fauna. The occurrence of *Libythea geoffrey* Godt., is especially noteworthy as the species is not known from the mainland of Borneo. In fact it is chiefly an Austro-Oriental species, but has a continental branch in Tenasserim and the Laos States.

It is found again in Palawan and the Philippines, but the Mangalum island form is very closely allied to the Palawan form. Another interesting capture is a series of *Papilio empedocles* F. which is a comparative rarity in Borneo, though apparently quite common on Mangalum.

I have purposely refrained from making any new races out of this material as I have none of the closely allied forms for comparison and have had chiefly to rely on descriptions, some of which are not entirely adequate unless one has access to the type specimen.

Family Nymphalidae

Sub-family Danainae

1. *Hestia leuconoe chersonesia* Frbst. (P. V, fig. 1).

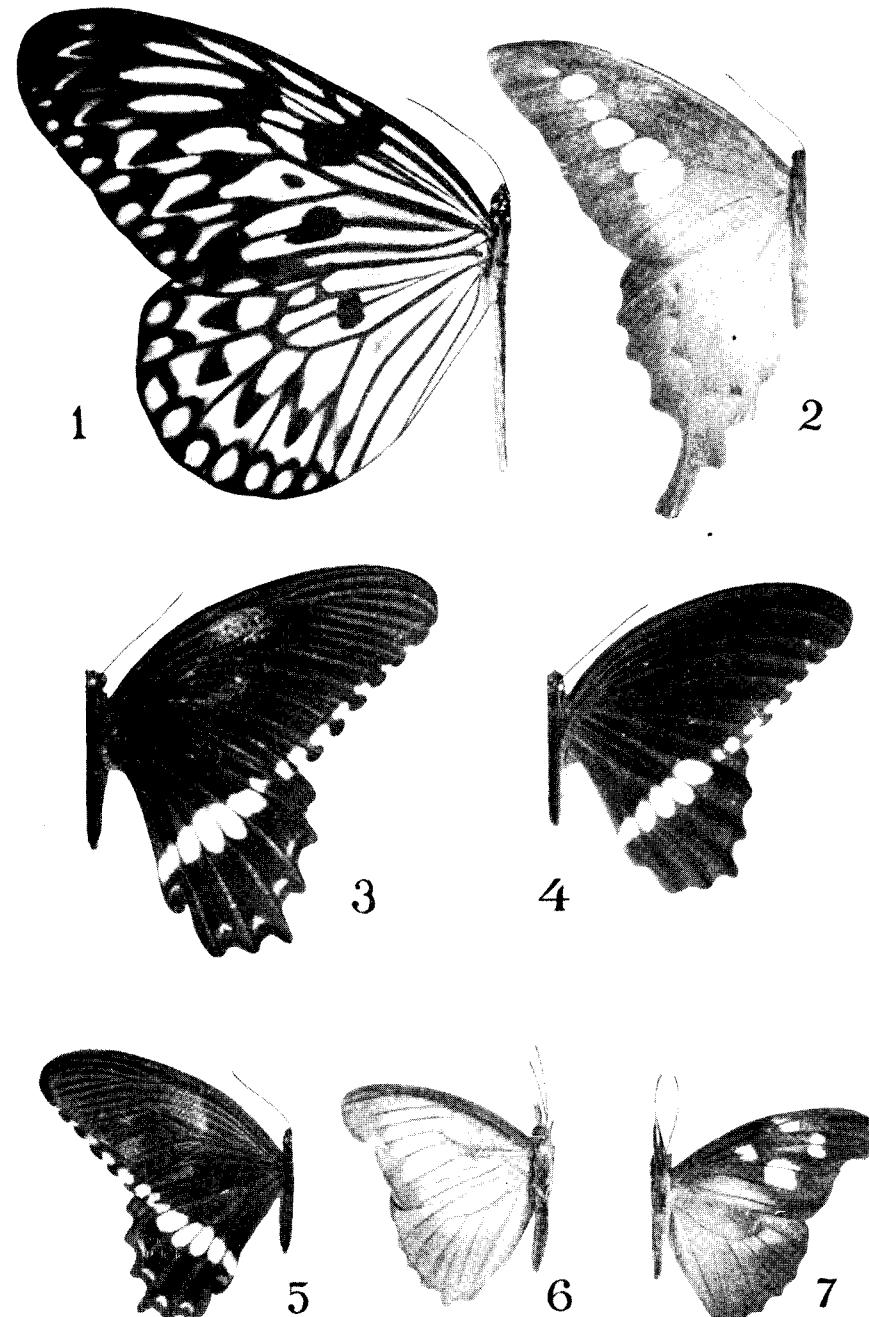
Fourteen specimens of this littoral species were collected. They are the melanotic form similar to that found on the north coast of Borneo, and which Grose Smith described as *nigriana*. The invalidity of this latter name has been dealt with by the late Dr. J. C. Moulton (Sarawak Museum Journal, Vol. II, Part II, p. 261, September 1915).

2. *Danaida lotis mezentius* Frbst.

Twenty-five ♂♂, 7 ♀♀. On the average these are slightly larger (length of forewing 42 mm.) than those on the Bornean mainland (length of forewing 38 mm.).

3. *Danaida similis vulgaris* Btlr.

Twenty-four specimens, typical.



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Sub-family **Satyrinae**

4. **Ypthima pandocus** Moore.

Seven specimens. Length of forewing: ♂ 20, ♀ 20—22 mm. This may be a new race, more closely allied to *Y. p. calanus* Frsht., from Jolo Id., Sula Group than *Y. p. jamaeus* Frsht. from Banguey Island.

It appears to differ from the former only by the darker coloration of the underside, and from the latter by the larger eyespots. In all the specimens before me there is a small accessory apical eyespot, or an indication of one, on the underside of the hind wing. I have some rather similar specimens from Kudat on the Bornean mainland (Sept. 1st—18th 1927) which differ, however, in the smaller subanal ocellus on the hind wing above.

Sub-family **Nymphalinae**

5. **Cupha arias cacina** Frsht.

Thirteen specimens, rather darker but otherwise agreeing with Fruhstorfer's *f. pseudarias*, described from a dry season form on Mantanani Island.

Family **Papilionidae**

6. **Papilio polytes** (?) *valeria* Jord. (Pl. V, figs. 3, ♀; 4, ♂; 5, ♀).

I have referred a long series of 40 ♂♂ and 12 ♀♀ to Jordan's form: *valeria* which he described from 3 ♀♀ from Mantanani Ids. We have two ♂♂ only from Mantanani Ids. (presumably ♂♂ of *valeria*) and these are very similar to the Mangalum Id. ♂♂ which differ however by the rather thicker marginal spots on the forewing above, and in the spots on the discal band of the hind wing above being slightly narrower than those of the Mantanani Ids. form, especially spot two from the costa which is almost quadrate. ♂♂ and ♀♀ similar in pattern, variable in size. The ♀♀ differ from the description of *valeria* Jord., in that the second discal spot on the hind wing above and below is longer than broad. Marginal spots on hind wing above at least four visible (excluding the red anal spot), these are reddish or whitish-yellow. Length of forewing: ♂♂ 40—54 mm.; ♀♀ 44—58 mm.

7. **Papilio memnon memnon** L.

Nine ♂♂, typical. 7 ♀♀, *f. laomedon* Cr. Distributed throughout Borneo, also on the Natuna Ids. Banka, and Java.

8. **Papilio empedocles** F. (Pl. V, fig. 2).

Eleven specimens. The occurrence of this butterfly on Mangalum Id. is of especial interest, as it is generally only found in hilly country, and then only taken singly. It is known from the Malay Peninsula (rare) Sumatra, Batu Ids., Java, Banka, Borneo and Palawan.

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Family **Pieridae**

9. Appias albina Bsd.

Two ♂♂, 2 ♀♀. This race seems to be *A. a. confusa* Frhst., the ♀♀ are ♀—*f. principalis* Frhst.

Family **Erycinidae**

10. Libythea geoffrey philippina Stgr. (Pl. V, fig. 6, ♂; 7, ♀).

This is a most interesting species and has yet to be found on the mainland of Borneo. Thirty-six specimens were taken of which 18 were males. I have not seen specimens of *philippina* Stgr., described from Palawan, but from Staudinger's description (Iris, Band II, pp. 87—89, 1889) and the figure in Seitz' Macrolepidoptera of the World (Vol. IX, pl. 139, g.) I can find no constant distinguishing character except the size: in coloration and markings they appear to be exactly alike. Staudinger gives the size of the Palawan specimens as varying in expanse from 42—48 mm. The Mangalum Id. specimens are constantly larger: ♂♂ 51—59 mm., average 55.3 mm. ♀♀ 52—59 mm. average 55.4 mm.

Family **Lycaenidae**

These three species were kindly determined by Brigadier W. H. Evans, C.I.E., D.S.O., of Quetta, India.

11. Chilades calyptra Frhst.

Four ♂♂, 12 ♀♀. "So far only recorded from Palawan, obviously a race of *laius* Cr."

12. Chilades cleotas mindora Fldr.

Eleven ♂♂, 6 ♀♀. "Normal."

13. Nacaduba atrata nemana Frhst.

One ♂. "Very like the Indian form: *prominens* Mre."

Family **Hesperidae**

14. Ismene harisa Mre.

Ten ♂♂, 1 ♀. This species generally flies at dusk, and in the early morning.

15. Gangara thyrsis F.

One ♀. A worn specimen.

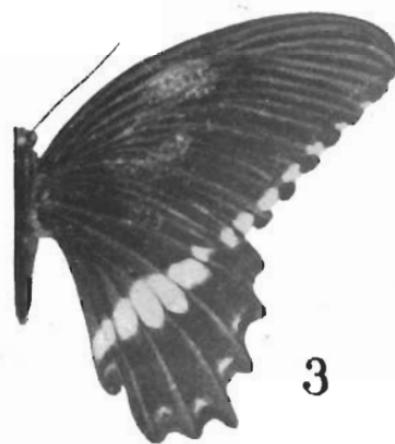
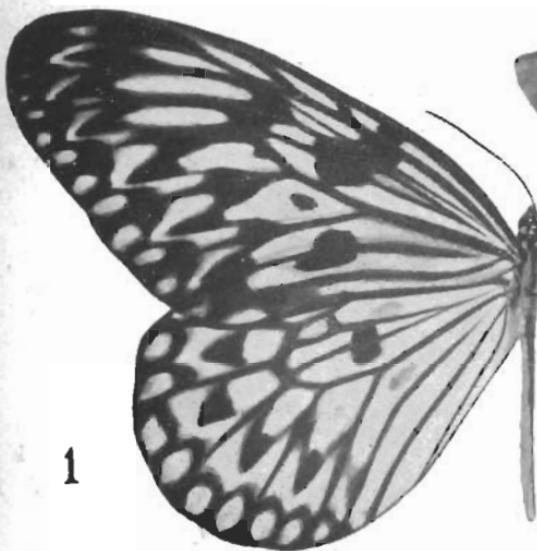
16. Taractrocera ziclea Pl.

One ♂.

A CONTRIBUTION TO THE ZOOLOGY OF MANGALUM ID., N. W. BORNEO

Figures on Plate V.

1. *Hestia leuconoe chersonesia* Frhst.
2. *Papilio empedocles* F.
3. *Papilio polytes* (?) *valeria* ♀.
4. " " " ♂.
5. " " " ♀.
6. *Libythea geoffrey philippina* Stgr. ♂.
7. " " " " ♀.



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